THE IDEA OF FERTILIZATION IN THE CULTURE OF THE PUEBLO INDIANS

BY

HERMAN KARL HAEBERLIN

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY, IN THE FACULTY OF PHILOSOPHY, COLUMBIA UNIVERSITY

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OF late Graebner and his school have given momentum to discussions on scientific method in ethnology. In a well-meant attempt to do away with unmethodological work in this science, Graebner has written a book on "the Method of Ethnology" (*Die Methode der Ethnologie*, Heidelberg, 1911). Since this treatise is obviously not merely intended to be an exposition of the method peculiar to Graebner himself we must infer that he gives himself the credit of expounding "the" method κατ' εξοχήν of ethnological research. This sweeping claim is brought out in the title of the book, as well as in its contents.

It is but fair to apply to the method of ethnology the same logical requirements that are applicable to scientific method in general. I take it for granted that Graebner does not wish to exempt ethnological method from these requirements. According to the general principles of logic, the method of a given science is the "way" or mode of reasoning by which we draw logical inferences from the empirical raw material of the given line of research. It must be no more. Wundt says:—

> Empirisch soll natürlich die Methodik der Geisteswissenschaften ebensogut wie die der Naturforschung in dem Sinne sein, dass sie in erster Linie auf eine Feststellung der Erfahrungstatsachen und in zweiter auf eine Verknüpfung derselben untereinander ausgeht, wobei die letztere unserem logischen Erklärungsbedürfnisse genügen soll ohne dass etwas zu den Tatsachen hinzugefügt wird, was in diesem Bedürfnis keine zureichende Rechtfertigung findet (*Logik* Bd. 3, S. 52).

Is it really possible that Graebner considers his method to fulfill this requirement? The clearest expression of the facts seems to me to be given by Foy in the preface to Graebner's treatise:—

> Dass es sich bei dieser kulturgeschichtlichen Methode . . . um eine konsequente Durchführung ganz bestimmter Grundsätze (handelt) wird der vorliegende Band beweisen (p. xvi).

The principles that are usually termed the theory of the "*Kulturkreislehre*" have been expounded by Graebner as "the method" of ethnology. If Graebner's book claimed to be nothing more than what it really is, namely, a consistent elaboration of subjective principles, it would have a theoretical value of its own; but, since Graebner has attempted to lay down "*the*" method of ethnology, he is subject to criticism on a broader basis.

Being conscious of the near relation of ethnology to history and at the same time of the admirable qualities of Bernheim's work on historical method (*Lehrbuch der historischen Methode*), Graebner employs a scheme of treating his subject that is in many respects parallel to that of Bernheim. Nevertheless, Graebner is under the impression that the book of Bernheim has a great gap (*eine grosse Lücke*, p. 3) and attempts to supplement this shortcoming by accessory considerations. At this point, however, he introduces into Bernheim's mold of objective considerations on method those subjective principles on which the life and death of the "*Kulturkreistheorie*" depends. The proclamation of these principles is obviously the *raison d'être* of Graebner's treatise on the method of ethnology.

If this treatise is characterized as a "konsequente Durchführung ganz bestimmter Grundsätze," the question arises just what these principles are. As far as I can see, there are two fundamental dogmas on which the "*Kulturkreistheorie*" is constructed. The first is that truly objective criteria can be found to determine cultural relations and the second that cultural strata are real and can be objectively specified.

The alleged objective criteria of cultural relations are, according to Graebner:—

> das Kriterium der Form, d.h. der Übereinstimmung in Eigenschaften, die sich nicht mit Notwendigkeit aus dem Wesen des Objektes ergeben, und das Kriterium der quantitativen Übereinstimmung (p. 108).

These criteria according to Graebner have the advantage of general applicability ("*allgemeine Anwendbarkeit*," p. 109). This seems to me to be the crucial illusion. These criteria are neither generally applicable, nor is there any objective means of specifying in each case their degree of applicability.

Let us for the present confine our attention to the criterion of form. There are three reasons why this is not objectively applicable. Firstly, the different elements of a culture, for instance the material culture, social organization, myth motives, emotional values, which by the way, are as objectively real as are bows and arrows, cannot be reduced to a common denominator of comparison on account of their essential qualitative heterogeneity. Secondly, the range of cultural possibilities varies in the case of each specific cultural phenomenon.[1] Thirdly, cultural phenomena may be transformed qualitatively according to the specific nature of psychic actuality. For the first reason stated, for example, the objective forms of geometric ornaments and the interpretations that may be found associated with them show an absolute disparity of the applicability of the form criterion. For the second reason,—the varying range of possibilities,—languages and forms of descent, for instance, are of extreme inequality in the degree of applicability of the criterion of form; languages on the one hand being infinitely variable; form of descent on the other being necessarily limited in its possibilities. The same point is brought out when forms of philosophic speculation are compared with such heterogeneous phenomena as those of material culture. The monism of Laotse and that of Parmenides show a marked degree of identity or similarity. From what we know of the development of abstract thinking the probability is that a monistic system of speculation is almost essentially developed in every higher form of culture. But even when one disregards this fact and takes the position of Graebner's postulate of cultural relations, is the necessarily vague applicability of the form criterion to these monistic philosophies in any way at all comparable to its applicability to the pitch of musical instruments,[2] for example?

Since the applicability of the criterion of form varies infinitely within a continuous range of degrees and since we have no third criterion to determine in each specific case the absolute degree of its

[1] See Goldenweiser: "The Principle of Limited Possibilities in the Development of Culture" (*Journ. Am. Folk-Lore*, Vol. 26).

[2] v. Hornbostel, "Über ein akustisches Kriterium für Kulturzusammenhänge" (*Zeitsch. f. Ethn.*, 1911).

applicability, the use of this criterion is not feasible, because it involves an undeterminable variable.

The criterion of quantity consists in the quantitative coincidence of forms. Since this coincidence of forms must be ascertained by the criterion of form and this criterion of form involves, as we have just seen, an undeterminable variable, the criterion of quantity must likewise partake of this undeterminability in its applications. Both criteria are, therefore, equally useless in the ascertainment of objective cultural relations.

As if obscurely conscious of the incongruity of his deductions, Graebner, in spite of the "objectivity" of his criteria and his usual alleged disdain of subjective procedure, makes at times a rather sweeping appeal to scientific tact. He writes:—

Freilich ist mit der Auffindung objektiver und sachlich einwandfreier Kriterien nur ein Teil der Arbeit geleistet. Auch das beste Gerät tut seine Dienste nicht von selbst, sondern bedarf der richtigen Anwendung. Allgemeine Regeln werden sich dafür kaum aufstellen lassen; sie ist zum grossen Teil eine Sache des Taktes, des Feingefühls, vor allem wieder der Selbstkritik (p. 125).

This appeal may seem rather surprising when advanced by an investigator who promptly characterizes the somewhat finer scientfic tact and the more searching self-criticism of other scientists, when opposed to his axioms, as a horror of space and time ("eine Scheu vor dem Raume und der Zeit," p. 115).

The second fundamental principle of the "*Kulturkreislehre*" and of "the method" of ethnology is, as already stated, that of the reality and determinability of cultural strata (*Kulturschichten*), which implies *per se* the secondary axiom of the diffusion of a culture as a whole. This *a priori* assumption determines the conception that Graebner has of the problems of ethnology.

Aus welchen Kulturschichten setzt sich die einzelne Kultureinheit zusammen; welcher Kulturschicht gehört das einzelne Kulturelement, die einzelne Kulturform an, und wie sind diese Kulturschichten, Kulturelemente und Kulturformen aufeinander gefolgt? (p. xvi).

This ethnological method is statistical, as well as geological. In his summary of Graebner's treatise Ankermann says:—

Die gesammte Geschichte einer Kultur muss sich schliesslich in ihrer Zusammensetzung abspiegeln. Wenn wir also gewissermassen einen Querschnitt durch

eine Kultur machen könnten, so würden wir die Schichten sehen, aus denen sie besteht, und würden daraus Schlüsse auf ihre Entwicklung ziehen können, wie der Geolog aus der Aufeinanderfolge der Sedimente die Geschichte der Erdrinde abliest.[1]

This leads us to a discussion of a fundamental concept involved in the study of the cultural development of man; namely to what Wundt calls the actuality of psychic life.[2] Graebner's "*Kulturschichten*" are static in the same sense as are the sediments of geology. According to him, a culture, just like a vertical section of geological layers, consists of the sum total of these static elements. Whereas in Wundt's conception, culture is a dynamic phenomenon is the truest sense of the word and in its entirety is something beyond the mere sum of all its constituent parts. For instance, in the psychic development of the individual, as well as in that of culture objective, ethical concepts have developed from non- or pre-ethical motives. When we consider that our ethical concepts are foreign to more primitive cultures, we ask, how we could explain and conceive the existence of these ethical concepts, if not by the idea of dynamic development of psychic life. The ethical concepts and the antecedent motives, which in the course of development have led up to them, are qualitatively distinct and therefore incomparable. The result is thus something new—something creatively new. The psychological principle involved is called by Wundt the heterogeny of ends, which signifies:—

dass in den gesamten Umfang menschlicher Willensvorgänge die Wirkungen der Handlungen mehr oder weniger weit über die ursprünglichen Willensmotive hinausreichen, so dass hierdurch für künftige Handlungen neue Motive entstehen, die abermals neue Wirkungen hervorbringen an denen sich nun der gleiche Prozess der Umwandlung von Erfolg in Motive wiederholen kann.[3]

What has just been applied specifically to ethical concepts is of universal applicability in cultural development. How then can we "read-off" the history of a culture from its "*Kulturschichten*" in the same way that a geologist deciphers his layers? How can we

[1] Ankermann, "Die Lehre von den Kulturkreisen" (*Korrespondenzblatt der Gesellschaft f. Anthrop., Ethn. und Urgeschichte*, Bd. 42, p. 159); compare, Foy, *Führer des Museums für Völkerkunde in Coelm*, p. 17.

[2] *Logik*, Band 3. S. 260.

[3] *Ethik*, 3, Aufl. Bd. 1, S. 274–5.

analyze by a scheme of geological preconceptions a phenomenon which, due to its very nature, can be understood only from the perspective of psychical actuality?

These considerations, which demonstrate the evanescent nature of cultural strata, constitute at the same time the third reason already alluded to, why Graebner's criteria are not objectively applicable.

Obviously the notion of cultural stratifications implies the other idea of the cohesion of a culture in all its parts. This assumption is essential in order that the alleged affiliations of a culture be readily detected wherever found. For Graebner cultural contact is a mere superimposition of cultural complexes. The idea of the fossilized permanence and cohesion of all elements of a cultural complex enters into all the considerations of the "*Kulturkreislehre.*" With it Graebner expounds the method of determining the chronology of cultural strata (p. 160), of reconstructing mathematically "durch eine Art Substraktionsverfahren" (p. 125) the history of civilization, and stamps the idea of the diffusion of isolated cultural traits as "*kulturgeschichtlicher Nonsens*" (p. 116).

While cultural constancy is, of course, a prominent phenomenon in cultural development, it is of a nature different from the conception Graebner and his school have of it. While some cultures, like that of the Pueblo, show a very marked degree of constancy, others, like that of the Cheyenne, for example, who within the range of two hundred years have changed their culture completely, seem almost to be characterized by their very inconstancy. The range of degrees of constancy is unlimited. On account of this intensive variability, cultural constancy is clearly but of relative significance, not of an intrinsic one, as would have to be the case, if it were useful for the reconstruction of cultural strata. An *a priori* generalization of cultural constancy is therefore a misconception. Where phenomena are of a singular nature, scientific investigation must be based on the individual empirical data themselves. A generalization is possible only after their analysis.

Furthermore, the constancy of a culture does not imply its cohesion as a whole in the process of diffusion, as the theory of

cultural strata necessarily postulates. Cultures do not necessarily diffuse as a whole, nor is that the common mode of diffusion. It is obvious, for instance, that a type of diffusion has taken place from the Northwest coast to the Plateau area and from the Pueblo to the Navajo that has extended only to limited and more or less dissociated parts of the participating cultures.

Graebner has, as we have seen, introduced postulates into his method of ethnology that are highly problematic and far from being objective. We agree with him that it is desirable to insist on methodological efficiency in all ethnological investigations. But since method is logically but a means to an end and does not purpose to prove a theory, it must be insisted that we need method in all our work, but never a special and preconceived kind of method.

The various objections that have been brought up in the foregoing discussions against Graebner's "*Kulturkreislehre*"are ultimately included in the one fact that Graebner excludes *a priori* from his considerations the psychological problem of cultural development. The way in which Graebner refers to psychology is, I believe, instructive for his point of view in general. Purely formally it is interesting to note that he leaves this discussion for the very last paragraph of his book. After speaking of the importance of the knowledge of the human psyche, Graebner says:—

> Von grösster Bedeutung ist sie (die psychologische Begabung) aber überall da, wo die objectiv methodischen Kriterien keine eindeutigen Schlüsse ergeben und also die Hypothese eingreifen muss. Wo etwa die Entwicklungsfolge mehrerer Formen, wo die Zugehörigkeit einer Erscheinung zu dieser oder jener Kulturgruppe nicht objektiv festzustellen ist, da werden die Probleme zu Fragen der psychischen Kausalität (p. 170).

It seems to me that this is a most superficial manner to treat of psychology. Graebner, after having abolished the psychological problem *a priori* from all of his "objective" considerations reserves the right to reintroduce it as a convenient material to fill out the gaps in the "general" applicability of his "objective" criteria.

While this psychological appendix of Graebner's treatise cannot be regarded as a serious attempt to cope with psychological problems, Ankermann's standpoint is clearly defined and merits at-

tention. After summarizing the considerations of Graebner he adds:—

Damit sind aber natürlich nicht sämtliche ethnologischen Probleme gelöst. Es bleibt noch die Erforschung der Entwicklungsreihen und der Ursachen der Kulturerscheinungen. Das ist eine ganz andere Aufgabe, die auch eine ganz andere Methode erfordert nicht eine historische, sondern eine psychologische. Aber wir werden diese Aufgabe mit viel grösserer Aussicht auf Erfolg in Angriff nehmen können, wenn erst die vorhin beschriebenen Untersuchungen durchgeführt sind (op. cit., p. 161–2).

From this it is obvious that Ankermann, taking an independent position in this respect, does not advocate the "*Kulturkreislehre*" because he is unconscious of the existence of real psychological problems, but because he assumes that the historical and the psychological phenomena can be investigated quite independently. This is, however, I believe a crucial error. The psychic side of culture cannot be disposed of as an accessory element and does not exist independently, but is at every point in time and space inherently associated with the other side of culture, with the historical side. The psychical and the historical are but two different aspects of the same thing. Every cultural phenomenon involves some psychic process, which determines the singularity of its significance. Thus every individual case of diffusion, for example, is not a mechanical phenomenon of historical contact and therefore not automatic, but is rather a phenomenon with a specific psychological content and is therefore of a singular nature. How then can we separate in our investigations phenomena which are characterized by their inseparable coherence?

The disregard of the intrinsic association of all psychic and historical phenomena seems to me to be the real stumbling-block of all discussions on parallelism versus "*Kulturverwandtschaft*" and vice versa. It is impossible that the two sides ever agree or that the one refutes the other, as long as the fact just mentioned is neglected. The one side, emphasizing the psychological problem alone will continue to find "*Elementargedanken*," while the other side, laying all stress on what it regards as the real historical facts, will continue to decipher imaginary strata of culture. Each side will contend that the other must be the first to prove its thesis em-

pirically. The refutation brought about of the "*Kulturkreislehre*" is not affected by demonstrating the greater plausibility of independent development, but by pointing out fundamental errors of method.

On account of the singular nature of all cultural phenomena the only logical conclusion with regard to method is that the individual phenomena as such must be the starting point of ethnological investigation. Our attitude towards the phenomena must be free of all assumptions that preclude the objective study of any of its phases, of such assumptions for instance that blind our vision towards psychological problems. All generalizations must follow from an analysis and comparison of the individual phenomena.

When comparing Navajo ceremonies with those of the Hopi, one finds that the external similarity of details in the ceremonies of the two peoples (prayer-sticks with facets, pollen, yucca suds, specific forms of the masks, nine-days duration of ceremonies, etc.) is so great that a denial of most extensive borrowing would be absurd, even if we did not know from other sources of the close cultural contact between the two peoples. Equally certain and equally objective as this historical inter-relation, however, is the other fact that the psychological setting of the Navajo ceremonies is altogether different from that of the Hopi ceremonies. While the great Navajo ceremonies are all focused on the healing of the sick,[1] those of the Hopi are obviously directed on the production of fertility for the fields. This is a generalization that can be gained from an analysis of the specific phenomena of the rites. The bull-roarer, to take but one example, is used in the ceremonies of both peoples and is beyond a doubt historically interrelated. But while among the Hopi it is unmistakably associated with the production of rain, the shaman of the Navajo, after swinging it applies it to specific parts of the body of the patient with the object of curing him.[2] From this we are justified in inferring that the psychological attitude of the Hopi priest and that of the Navajo shaman towards the bull-

[1] Matthews, *Navaho Legends*, p. 40.

[2] Tozzer, "Notes on Religious Ceremonials of the Navaho," *Putnam Anniv. Vol.*, p. 336.

roarer differ fundamentally in spite of the historical identity of the objective side of this instrument. In each case an entirely different group of concepts or, probably more exactly, of collective representations,[1] is involved. A discussion of the ceremonial use of pollen, snakes,[2] prayer-sticks, etc., in the Navajo and Hopi rites would bring out the same point. The diffusion of the material substratum, so to say, of a cultural phenomenon by no means implies the simultaneous diffusion of the associated ideas. These psychological associations, though integral parts of a culture, do not exist for Graebner. They evade the "objective" form criterion and thus do not lend themselves to the book-keeping of the "*Kulturschichten*."

What pertains to diffusion also holds good for the variable stability of cultural traits. The degree of constancy of a culture is not open to a purely historical explanation. The marked constancy of the Northwest Coast culture and the relative inconstancy of that of the Plateau area cannot be "read-off" from any cultural strata but involve a psychological problem of a peculiar type.

Schematically considered, cultures are characterized by their psycho-historical relation to other cultures on the one hand and by the psycho-historical genesis of its "setting" on the other. These two sides of cultural development, which may be called the extensive and the intensive lines of causal interrelations, are, of course, again inherently interlinked. While a culture like that of the Plateau area is characterized by the passivity of its relations to other cultures and by the lack of originality in its setting, the culture of the Pueblo offers an altogether different picture. It is true that the process of extensive diffusion is equally evident here as in the Plateau area and numerous elements of the Pueblo culture, as for instance agriculture, the emergence idea, the water serpent, the hoop and pole game, and many others, are found diffused over large areas of North America and are in no way in themselves characteristic of the Pueblo culture. Still this culture shows an originality in its setting, which is just as objectively real as are drums and clubs

[1] Lévy-Bruhl, *Les fonctions mentales dans les sociétés inférieures*, Chap. 1.

[2] Tozzer, *op. cit.*, p. 330.

for Graebner. The setting of the Pueblo culture, which is in no way equal to the sum of all its traits diffused from without implies a process of active assimilation of all diffused elements, which focuses the most heterogeneous phenomena in a definite and characteristic direction.

Let us take a concrete example. The area of the occurrence of the hoop and pole game in North America shows, on account of the continuity of the area and the complexity of the phenomenon, a case of extensive diffusion. The ideas, however, which have become associated with it in different areas, as among the Pueblo and in the Plains, are so heterogeneous that the ceremonial usages of the game are, in spite of its formal identity, psychologically quite distinct cultural phenomena. When we find that a large number of traits of Pueblo culture show "diverted" associations of this kind and that the different series of associations among themselves again display the same psychological trend, we have a means of characterizing this culture as distinct from others and of specifying its psychological setting.

The specific psychological characteristics of the Pueblo culture I have designated tentatively by the term of the "idea of fertilization." It must be insisted that this term possesses but the heuristic value of a catch-word. The idea of fertilization does not, of course, embrace the cultural setting of the Pueblo in its whole complexity any better than would the idea of healing the sick exhaust that of the Navajo. For the present, however, I think the term is sufficiently expressive, not to characterize the Pueblo culture exhaustively, but to indicate its characteristic trend in contradistinction to that of other cultures. This characteristic trend I shall try to specify on the following pages.

The relativity of the value of our catch-word appears furthermore from the fact that, in spite of the great similarity in the culture of the various Pueblo peoples, there are marked differences. The culture of the Sia, for example, would seem to be less distinct from that of the Navajo than is the culture of the Hopi. It must be borne in mind that no culture area is uniform in all its parts. The question before us is not, whether the setting of the Pueblo culture

when conceived in its geographical limits does not overlap at any point with that of another culture, but whether an analysis thereof brings out objective traits of the nucleus of the culture, which permit a characterization of its specific connotations.

The complementary conceptions of a Sky-father and of an Earth-mother, which are found in the Old World,[1] have also a wide area of occurrence in the New World. In North America this area is obviously continuous. While the ideas were typically developed in Central America and Mexico, they are also a universal feature of the tribes of the Southwestern cultural area, thus of all the Pueblo peoples,[2] the Navajo,[3] Apache,[4] Mission Indians,[5] Mohave,[6] and many others. They are furthermore common in the Plains, for example among the Pawnee,[7] Wichita,[8] and Omaha.[9] Morgan speaks of the same conceptions among the Iroquois. These instances may suffice to point out at least the general trend of distribution. The above-named ideas seem to be foreign to the mode of thinking of the tribes of the Northwest Coast and of the Mackenzie area, for example. As far as I can see, the distribution of these conceptions in North America corresponds closely to that of agriculture and thus somewhat more vaguely to that of pottery. What these coincidences mean future investigations will have to show.

Hence, the idea of the complementary sky and earth beings itself does not constitute a unique characteristic of the Pueblo. I shall, however, attempt to show that on account of the typical associations which this idea has met with in the culture of these peoples, it has found a specific expression characteristic of the center of the Southwestern culture area.

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[1] Compare for example Sanskrit, *Dyaus-pitar* (dyaus-heaven); Greek, Zeus; and Latin, Jupiter (Jovpater).

[2] Dr. Spinden kindly informed me from his unpublished material that among the Tewa of the Rio Grande "the Sky-father and the Earth-mother are very general concepts and are doubtlessly complementary."

[3] Reference 56, p. 35.

[4] Personal information from Dr. Goddard.

[5] Reference 18, p. 187.

[6] Reference 4, p. 178.

[7] Reference 17, p. 14–16.

[8] Reference 15, p. 19–20.

[9] Reference 54, very frequently alluded to by Miss Fletcher; reference 55, p. 733.

When speaking of the center of a culture area, we are, of course, aware of the relativity of this term, especially in the realm of mythology and religion. Mythological and religious concepts are often so vague and their historical fates so varied, that with reference to them we cannot always hope to make a clear and sharp distinction between cultural centers and marginal regions. In our interpretations we shall therefore from time to time draw neighboring tribes of the Southwest into the range of our considerations of the Pueblo culture.

In the mind of the Zuñi, the Awonawilona, which Cushing calls "All-container" and which Mrs. Stevenson evidently conceives as manitou, is vague and changeable. In its concrete form it is conceived as "the blue vault of the firmament,"[1] which sends the lightning and the accompanying rains. It is psychologically interesting that the Sky-god and the Sun-god are interchangeable concepts. While the Sky-god seems to exist only in theory, so to say, it is always the Sun-god, or more correctly the Sun-bearer, who figures as the mythological hero. Where the dramatic action of mythology does not come into play, the Sky-father and the Sun seem to be interchangeable and are probably not clearly distinguished in the mind of the natives. Thus it is sometimes the sky and sometimes the sun that is conceived as fructifying Earth-mother.

This concept of fructification is in the mind of the Indians either general or quite concrete and specific. In its general form it is, as it seems, the more or less speculative idea of the sky lying on and embracing earth-mother.[2] In its specific mythological form the concept, so common in the Southwest, is that of a woman, obviously an Earth-goddess, who while lying down is impregnated either by a sunbeam or by a drop of water. Then again it is the rain in general that affects the union and the fertilization. The interrelation of the associations is evident. Psychologically it is interesting, that the Hopi and Zuñi, when petitioning for rain—an act of a very concrete and practical purport—do not address the sky, as one would logically expect, but the sun,[3] or, if you like, the personification associated with it.

[1] Reference 85, p. 23.

[2] Reference 7, p. 379.

[3] 35, p. 85.

A concept of the kind just discussed must, of course, be regarded as a psychological complex of associated ideas, saturated with emotional values of the group.[1] Since complexity is of the very nature of this concept, we must guard against its undue simplification through analysis.

As stated above, the complementary concepts referred to are themselves, not at all restricted to the Southwest. The Pawnee, for example, call the earth, the mother who gives birth to all things. But the way in which the idea of gestation and parturition is carried out and the religious rôle it plays in the Southwest, is not paralleled, as far as I am aware, in any part of America, north of Mexico. In speaking of the Hopi, Fewkes says:—

> The earth in their conception always existed, and, following the analogy of growing vegetation, organisms were given out of the earth or were born like animals. The earth to them is not a creation but a mother, the genetrix of lesser gods and animals, and the ancestor or first of the human race.[2]

Matthews believes the story of the emergence to be a myth of gestation and birth.[3] The earth-woman, known in the myths characteristic of the Southwest under various names, such as "The Woman of the Hard Substances" (Hopi) or "The Woman who Changes" (Navajo, Apache), is generally conceived as cohabiting with the sun and giving birth to the war-gods. In other versions she creates the ancestors of various clans from her epidermis.[4] The Mission Indians of Southern California, who in many respects belong to the Southwestern culture area, conceive the earth and the heavens as cohabiting. The earth not only gives birth to the great Ouiot, but also to mankind in general.[5] The figure reproduced by Kroeber representing the emergence of the people from "The Mother of All" leaves no doubt as to the conception of parturition.

An association not uncomparable with the one of the sky and the sun exists also between the earth and the moon. The idea

[1] For a discussion of the concept of the collective representation see reference 64, Chap. 1.

[2] 27, p. 350–1.

[3] 73, p. 738.

[4] 72, p. 95, and 71, p. 31.

[5] 18, p. 187, and 63, p. 312–14.

appears clearly in a Pima myth, in which Earth Doctor, the universal creator, says:—

I shall unite earth and sky; the earth shall be as a female and the sky as a male, and from their union shall be born one who will be a helper to me. Let the sun be joined with the moon, also even as man is wedded to woman, and their offspring shall be a helper to me.[1]

Among the Pawnee the moon, a female, cohabits with the sun, a male, and gives birth to the first man.[2]

The following is an interesting passage taken from a Tewa myth recorded by Lummis. P'ah-hlee-oh, the Moon-maiden, was the first woman. Of her was typical the Mah-pah-róo, the Mother, i. e., an ear of corn with feathers. She was the seed of all humanity and the mother of all things, as the sun was the father of all things. The Moon-maid was the companion and wife of the Sun.[3]

The Tewa [4] and Keres [5] regard sun-father and moon-mother as their principal deities. The moon-mother of the Keres is represented by the *yaya*, or "mother," which corresponds to the Sia *Iärriko* and the Hopi *tiponi*. Again, the Sia emblem is unequivocaly associated with "your mother in the world below." [6]

When speaking of these associations of the earth and the moon and their respective deities, it is necessary to avoid intentionally the term of identity. Although equations of this kind are commonly used by investigators to simplify their interpretations, they are certainly not psychologically warranted. It would be absurd to draw from the common traits of a moon and an earth-goddess, the inference that the people in whose religion these deities occur really conceive the moon as such and the earth as such as identical or even as similiar concepts. On account of their common associations these deities may of course fuse and then be conceived as one personification with one name. The only term that is correctly applicable and that does not say more than is warranted by the

[1] 78, p. 208.

[2] 20, p. 743, and 14, p. 4.

[3] 69, p. 71–72.

[4] 1, p. 308.

[5] 1, p. 288–9.

[6] 82, p. 40–41.

data is that of associations,—in this case, of associations between the earth on the one hand and the moon on the other. The decisive point seems to be that the beings that figure in primitive religion and mythology, never having undergone a logical specification and systematization, are not clearly definable, are not "finished" products of the human mind, but are rather subject to kaleidoscopic changes due to the shifting angle of apperception of the folk as a whole as well as of its constituent individuals. Thus in some myths, ceremonies, and customs the specific associations of a goddess with the moon may come into prominence more clearly than in others; we should then for the sake of brevity and convenience speak of a Moon-goddess. In other cases the associations to the earth may stand in the foreground; we should then briefly speak of an Earth-goddess. These terms do not imply that the associations of this goddess with the moon or the earth, as found in this area, exhaust all the possible or actual associations of the deity in the mind of the people. It is an *a priori* fact, that the whole wealth of specific experiences may enter into the religious and mythological imagination of a people. After these considerations I hope I shall not be misunderstood when I speak for the sake of practicability simply of a Moon or an Earth-goddess, or of similar concepts.

According to Cushing [1] an important being of Zuñi mythology is,

> the gentle moon, mother of the women of men, through whose will are born the children of women, the representative in this system of deities of the Shewan-okao (Mrs. Stevenson writes Shíwano-ᵗka), or seed-priestess, younger sister of the priests of the temple. . . .

The complementary pair of deities, Shíwanni, corresponding to the heavens, and Shíwano-ᵗka, the "Earth-mother" [2] corresponds exactly to the Ashiwanni (plural of Shíwanni), the Zuñi rain priests and to Shíwano-ᵗka, the Priestess of Fecundity, in the Zuñi ceremonial organization.

In this way the idea of fertilization finds in the Zuñi religion a

[1] 6, p. 191.

[2] 84, p. 33–34.

double expression in a god and a goddess on the one hand and in a society of priests and a priestess on the other. This complex of associations seems to me to constitute a striking characteristic of the center of the Southwestern culture area.

It may be of interest to note the general tendency in the Southwest to conceive the two complementary beings as brother and sister. Among the Luiseño the sky is a brother of the earth.[1] The Zuñi regard the sun and the moon as brother and sister.[2] In a myth motive common to the Zuñi, Navajo, and Luiseño, a brother and sister entertain unlawful connubium. Siwulu^{t}siwa and Siwulu^{t}-si^{t}sa,[3] as they are called in the Zuñi version, and First Man and First Woman of the Navajo version[4] become conscious of their crime. The Luiseño version identifies them clearly as the Sky and Earth-mother.[5] The Zuñi couple gives birth to the Koyemshi, the masked personators of whom are closely associated with the idea of fertility in the ceremonial organization. In the face of these facts one might be led to ask whether the concept of the blood-crime possibly denotes an accentuation of the idea of sexuality, but I dare not offer an explanation of the connubium of brother and sister.

In the Hopi myths and ceremonies there appears a large number of goddesses; called Wuhti (Women), who have different names, but whose attributes and functions are so similar that there can be no doubt as to the identity of the ideas underlying their personifications. Fewkes attributes this multiplicity to the composite nature of the Tusayan population. He says:—

> The Earth-Mother appears under various names, which differ in different clans, apparently indicating that before the various clans now composing any one Hopi pueblo were united, each was familiar with the conception of an Earth-Mother, and denominated this being by a clan name, as Old Woman, Goddess of Germs, Spider Woman and various other appelations.[6]

The question, of course, remains open, whether we are here dealing with a case of convergence or one of assimilation.

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[1] 18, p. 187.

[2] 85, p. 109.

[3] 85, p. 32–33; 84, p. 35–36; 7, p. 404–5.

[4] 70, p. 69–70.

[5] 19, p. 129–32.

[6] 40, p. 90; see also 34, p. 49, and 33, p. 449.

According to a Hopi origin myth recorded by Voth[1] Huruing Wuhti, "Hard Being Woman, i. e., woman of that which is hard" (shells, corals, turquoise, beads) lived in the ocean in the east. Another Huruing Wuhti lived in the ocean in the west. Each lived in a kiva. The sun, who also existed at the time, traveled continually from the eastern kiva to the western kiva, emerging in the morning from the hatchway of the former and entering in the evening the hatchway of the latter. During the night he would continue his journey under the water from west to east.

According to another version[2] there was only one Huruing Wuhti, who lived in the west. She "owned the moon, the stars and all the hard substances, such as beads, corals, shells, etc." This evidently shows an association of the "hard substances" with the moon. The sun lived away in the east. Huruing Wuhti sent the moon to fetch the Sun. The sun thereupon traveled from the east to the west to visit the Wuhti. When he arrived the Wuhti said to him: "Thanks that you have come, my father, because you shall be my father." "Yes," the Sun said, "and you shall be my mother, and we shall own all things together." Hereupon the sun and the woman created by magic birds, animals, and man.

Huruing Wuhti (Fewkes writes the name *Hu-zru-in-wu q-ti*) also plays a prominent rôle in the legend of the Snake ceremony. Of this there are a number of variations in the several villages. These variations are, although often contradictory, remarkably similar and bring out with great constancy the traits and actions attributed to Huruing Wuhti and to Tiyo, the Snake Hero. These two present characteristics which show their association with the earth and moon, on the one hand, and with the sun on the other. The purport of all the variations of the so-called snake legend is that a youth travels to the place where the sun sets and thence to the underworld. After various adventures he returns with the secrets of the Snake ceremony.

Tiyo, the son of a chief, lived with his people at the Grand Cañon,[3] a place, which is distinctly associated in the mind of the

[1] 89, p. 1.

[2] 89, p. 5 et seq.

[3] 90, p. 349; 12, p. 255.

Hopi, with the *sipapu*, the orifice through which the people emerged from the underworld.[1] This *sipapu* is associated with the rising and setting sun. Tiyo wonders where all the water of the river flows to. He therefore decides to float down the river to investigate. After a series of experiences that vary in the different versions, Tiyo comes to the kiva of Huruing Wuhti situated at the mouth of the river.[2] The walls of her kiva are decorated with beads, turquoise, shells and the like, the "hard substances." Huruing Wuhti at first appears to Tiyo as an old ugly hag. But having the power of changing her form, she becomes a beautiful maiden at night. The Walpi version speaks of her as the "kind mother" with tender and generous heart. According to the Mishongnovi and the Shipaulovi versions Huruing Wuhti, after taking the form of a beautiful maiden, invites Tiyo to sleep with her. In the Walpi and Oraibi versions the sun-man, a handsome youth, descends into the kiva of the Wuhti, while Tiyo is there. He invites Tiyo to accompany him on his journey under the earth. They descend into the earth through the *sipapu* in the floor of the kiva of the Wuhti. In the middle of the earth below they visit Mü-i-yiñ′-wûh, the God of the Underworld and of Germination.[3]

In spite of the contradictions of the various versions, I believe that Tiyo is more correctly a sun-god or rather that his associations with the sun are unmistakable. Equally clear are the relations of Huruing Wuhti to the earth and the moon. Thus she lives in a kiva into the hatchway of which the sun descends in the evening; she is the controller of the moon; at night she becomes a beautiful maiden; she is the kind mother and creates animals and men; her relations to the sun-god are unequivocal.

The same woman in the west also figures prominently in the mythology of the Athapascan of the Southwest. Esdzanadlehe, "Woman-who-changes," as the San Carlos Apache call her, is in the myths regarded as the mother of the wife of the sun, but in the songs she appears as his wife. The Jicarilla Apache say that the earth

[1] 37, p. 106.

[2] 37, p. 112 et seq.; 12, p. 258 et seq.; 90, p. 350 et seq.; 89, p. 33 et seq.

[3] 37, p. 113.

was made of the body of this woman, the Rio Grande being her backbone and Pikes Peak her head.[1] Estsanatlehi, "Woman-who-changes," of the Navajo lives in a house in the west which is just like that of the sun in the east.[2] She is the wife of the sun and mother of the war-gods.[3]

The distribution of these myth motives regarding the earth-goddess and her specific relations to the sun and to the twin war-gods is not coextensive with the much wider distribution of Sky-father and Earth-mother. These latter concepts are not, as we have seen, in themselves characteristic of the Pueblo, but their secondary associations, at least among the Hopi, with the Snake-Antelope ceremony and thus with a very specific expression of the idea of fertilization seem to me to be typical of the center of the culture area in question. We shall later on find a similar condition of affairs brought out in the case of the twin war-gods.

The idea of the emergence of mankind from the inside of the earth to its surface is likewise not confined to the Southwest. It is found in the Plains.[4] In the Southwest it seems to be characterized more or less distinctly by an association with the analogous idea of gestation and parturition. The case of the Luiseño has already been mentioned.[5] In the Zuñi creation myths, according to Cushing, the sexual intercourse of Sky-father and Earth-mother causes the latter to conceive in her ample womb the races of man.[6] The womb is the underworld through which the people had to pass before reaching the surface of the earth.

Another phenomenon distinctly characteristic of Pueblo culture is the elaboration of the idea of the *sipapu* as the place of emergence. This is brought out very clearly by a comparison of the Pueblo with the Navajo. The myth of emergence of this latter people is almost literally the same as some of its versions among the Pueblo, but still the specific ceremonial significance of the *sipapu* is entirely absent.

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[1] Personal information from Dr. Goddard.

[2] 56, p. 355.

[3] 70, p. 105–6; 72, p. 95; 71, p. 19.

[4] For example among the Arikara: 16, p. 12–17.

[5] 63, p. 312–14.

[6] 8, p. 1; 7, p. 379 and 382.

It is necessary to distinguish between the mythical *sipapu*, which is conceived as the place of emergence of mythical times, and the ceremonial *sipapu*, which is the concrete counterpart of the mythical one. The mythical *sipapu* of the Hopi is, according to Fewkes,

> the traditional opening through which, in ancient times, the people came to the earth's surface, and is associated in the Indian mind with that opening through which individuals as well as races are born.[1]

It is the exit from the underworld, where the house of the sun and the earth-goddess is and where the latter gave birth to the clans of man.[2] The Hopi usually conceive it as located in the Grand Cañon.[3]

The *sipapu* is thought of as the opening to the underworld, the place of fertility. But lakes and springs are also conceived as passages of communication to this place and are more or less consciously identified as *sipapus*. The Rio Grande Pueblo quite generally claim that they emerged from a lake or *lagune*. The Taos lived in a lake before migrating from the north to their present home.[4] The Tewa of the upper Rio Grande locate the *lagune* of their birth in southern Colorado and call it *Ci-bo-be* or *Shi-pap-u*.[5] Similar beliefs are recorded from the Tewa of Ysleta near El Paso, Texas,[6] the Jemez,[7] Sia,[8] and Acoma.[9]

In the ceremonial life of the Pueblo various devices are looked upon as passages of communication with the deities of germination below. Thus in the Snake-Antelope ceremony the plank, upon which the dancers stamp in the public performances, is regarded as a *sipapu*. In the Oraibi Powamu a sand mosaic is used which is representative of the *sipapu*.[10] From the center of it leads a yellow line,—the path of life. A medicine bowl standing on the middle of

[1] 38, p. 20.
[2] 40, p. 86.
[3] 24, p. 227; 52, p. 35; 88, p. 68.
[4] 74, p. 42.
[5] 3, p. 111; 1, p. 303.
[6] 25, p. 71.
[7] 2, p. 207–8; 1, p. 315.
[8] 82, p. 39.
[9] 61, p. 299.
[10] 88, Plate 53.

a pile of sand, on which are drawn six lines corresponding to the cardinal points and representing the earth, is also used to represent the mythical orifice.[1] The principal and constant ceremonial *sipapus*, however, are the orifices in the floor of the Hopi and Zuñi kivas.[2]

They have been called "symbolic" of the mythical *sipapu*, out of which the people emerged. I would like to call attention to the fact that, although the term "symbolic" may be used for the sake of convenience of expression, the *sipapu* of the kiva is conceived by the natives as a *real* opening to the underworld and in so far is not at all symbolic. The distinction between the symbolizing and the symbolized object often corresponds to our own ideas, but not always to the psychology of the natives.

As the underworld is the abode of the deities of germination and fertility, the Hopi evoke their help by calling down the *sipapu* of the kiva.[3] Obviously with the same idea in mind offerings are deposited in the crypt or *sipapu* of the Walpi plaza.[4] In Zuñi food, prayer-sticks, and grains of corn are deposited in the circular opening in the floor of the ceremonial chamber.[5] The final act of the Zuñi winter solstice ceremony consists in depositing the meal of the altar painting, which is always considered a very effective substance, in the *sipapu* with a prayer for fertility.[6] In the night ceremonies of the Council of the Gods of Zuñi, offerings are deposited in the *sipapu* of the kiva.

> A diminutive game of 'sikon-yämune tikwane[7] with lashowawe (feathers) attached, grains of corn of the colors of the six regions, sweet corn, squash, watermelon, and muskmelon seeds are deposited as seeds in the earth. . . . Prayers are offered for the seeds to grow into life, and for rains.[8]

Of the various Hopi deities, who are associated with the under-

[1] 92, p. 27.

[2] 85, p. 209; 53, p. 268.

[3] 26, p. 55.

[4] 27, p. 360–1.

[5] 85, p. 187 and 209.

[6] 85, p. 141.

[7] The ring and stick game of the Koyemshi, which, as we shall see later, is closely associated with the idea of fertilization.

[8] 85, p. 247.

world and with the idea of germination, Müyiñwû[1] seems to represent the association in a typical way. He is thought to live under the *sipapu* of the kivas. Through the *sipapu*, which, as is stated, has never been closed since the races emerged, he sends the germs of all living things.[2] He controls vegetation and owns the all-important corn.[3] After arriving in the west at evening the sun gives the *pahos* (prayer-sticks) he has collected on his course during the daytime to Müyiñwû.[4] In the Walpi Snake legend Tiyo, the counterpart of the sun, does the same thing, and thus gets into the good graces of Müyiñwû, who tells him that he is in command of "the seeds of all vegetation that grows upon the surface of the upperworld, and of all animals and men who walk upon it."[5]

When one bears in mind that water and fertility are practically synonyms in the mind of the Pueblo, it is readily understood why the Great Waterserpent, the Palülükoñ of the Horn, should be conceived in a way that is very similar to Müyiñwû. Fewkes says he is the father of all life, just as Müyiñwû, the earth, is its mother.[6] While water and thus fertility are the general ideas with which the serpent is associated, he is specifically associated either with springs or with clouds.[7] The interrelation of these sources of fertility is apparent and characteristic of Pueblo culture. Palülükoñ is sometimes multiplied so as to correspond to the six cardinal points and is then regarded as the helpers of the six rain gods, the *Omowûh*,[8] who correspond to the Zuñi Uwannami. Fewkes represents him as having six udders, from which all the water and blood of the earth comes.[9]

[1] In the accounts of Fewkes and Voth Müyiñwû is sometimes referred to as a male deity, sometimes as a female one, and sometimes as a couple of a male and a female deity.

[2] 75, p. 17.

[3] 92, p. 29.

[4] 39, p. 436.

[5] 37, p. 113.

[6] 41, p. 110.

[7] The association between smoking and cloud-producing is well known. In the Berlin Museum (No. IV, B2503), there is a Pueblo *Omowûh* (cloud) pipe (obtained, according to the catalogue, from the Apache), on which is scratched a figure of a serpent, obviously the so-called "Plumed Serpent," out of whose mouth projects a zigzag line ending in a cloud symbol. On the opposite side of the bowl the zigzag with the cloud-symbol is repeated.

[8] 39, p. 433 et seq.

30, p. 16.

Springs and *lagunes*, as we have seen, are regarded as entrances to the underworld, as *sipapus*, and hence, as direct paths of communication with the gods of fertilization. The ideas involved are brought out clearly in numerous rites. The Walpians think the serpent lives in the sacred Sun Spring near their village.[1] Offerings are made to him at this spring; and in the Palülükoñti ceremony interesting rites take place here, during which his image is dipped into the water.[2] In the myths Palülükoñ figures as a water monster.[3] The Zuñi water serpent, Koloowisi, is the "Keeper of Cereals."[4] In the Zuñi initiation ceremony of the Kotikili[5] the Priest of the Bow and the Priestess of the Earth catch in a bowl the water poured from the mouth of an image of the serpent. This sacred water is partly drunk by each guardian and partly by his novitiate. Furthermore, "the boy sprinkles the corn stalked in his house with this water." Then the seeds of all the cereals that are poured through the abdomen of the serpent are caught in a blanket and distributed to all present.

The Great Serpent of the Pueblo is commonly known as the "plumed serpent." As far as I can see, however, the plumes are by no means an essential characteristic of him, neither in the myths nor in the rites. The term "horned serpent" would be equally appropriate, if, indeed, not more so. The conservative use of the term "plumed serpent" seems to me to be based on the more or less popular identification of the Pueblo serpent with Quetzalcoatl of the Nahuatl. This analogy is, I believe, misleading. While I am well aware of the extensive cultural relations between Mexico and the Pueblo area, I can see no reason why in this case the serpent of the Hopi and Zuñi should be any closer related to Quetzalcoatl than the horned water serpent of the Keres or of the Creek, for example.[6] Quetzalcoatl is the serpent of the Quetzalbird and at the same time the culture-hero of the Toltec. The Pueblo serpent, on the other

[1] 27, p. 370.

[2] 29, p. 279–80; 28, p. 624.

[3] 89, p. 102 et seq.; 11, p. 93 et seq.; 83, p. 544.

[4] 84, p. 36.

[5] 83, p. 552–3.

[6] 1, p. 292; 57, p. 259.

hand, has nothing whatsoever in common with a culture-hero. In mythology he appears clearly as a water monster, conceived in much the same way as by other American tribes. In the ceremonies of the Pueblo he is a deity of fertilization.

The attempt of Fewkes[1] to trace an historical relation between Palülükoñ and Quetzalcoatl does not seem convincing to me. It would seem to me that he does not interpret correctly the incidents of the myth of the Toltec[2] and that he overestimates the historical evidence of myths.

In the Walpi ceremonies of Soyaluna and Palülükoñti, images of Palülükoñ play a prominent part. Very suggestive as to the associations of this being with the idea of fertilization is the fact that to the backbone of each image are tied "a quartz crystal called the heart, and a package which contains corn seeds of all colors, melon, squash, cotton, and other seeds, and a black prayer-stick."[3] The images are invariably made to knock down all the plants of an imitated cornfield set up in clay pedestals before them. These plants are thereupon distributed to the women and girls present.[4] Fewkes thinks that we are here dealing with a representation of the destructive power of nature, which lays waste to the fields. This is not consistent, I believe, with the apparent value attached to the plants knocked over. An association with the lightning that strikes the cornfield—a phenomenon avowedly regarded by the Hopi as the acme of fertilization—seems much more comprehensible to me. If the etymology given by Fewkes for Palülükoñ[5] be correct then it is quite possible that -koñ (to strike down with ripeness) refers to this characteristic.

In the Pueblo culture there is doubtlessly a general interrelation between the moon and the idea of fertilization, corresponding to that of growth and water.[6] That this should be the case is not

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[1] 28, p. 622 et seq.

[2] 80, p. 29.

[3] 28, p. 622; 29, p. 277–8.

[4] 28, p. 608–9, 615, 617; 29, p. 280.

[5] 29, p. 282.

[6] According to Lummis (69, p. 58) the Tewa name for the moon is literally "Water-Maiden."

surprising after our discussions of the relation of the moon to the earth. Furthermore, the association of the moon with fertility is a common phenomenon in many parts of the world. For our present considerations it is of especial interest that the moon is unequivocally associated in a specific way with the serpent. The *tertium quid* of this association is doubtlessly the idea of fertilization. An instructive case in point is a screen used in the Oraibi Soyal ceremony. Voth gives the following description of its symbolism:—

> The figure in the center represents Müyiñwû, the god of germination. He holds in his right hand a growing cornstalk. . . . Over his head are symbols of clouds with falling rain and rays of lightning. . . . Under the cornstalk is the symbol of the moon, on the other side that of the sun. The semicircles on top are covered with cotton, to both sides are fastened four artificial blossoms, to the lower part watermelon, muskmelon, squash, cotton, pumpkin and other seeds and different kinds of corn.[1]

The figure of the moon, from which the cornstalk held by Müyiñwû seems to be growing, shows a drawing of the serpent on its disk. A song to the great water serpent is sung before this screen. An important rite consists in ceremonially scraping the seeds attached to the screen into a tray.[2] I believe all these various incidents speak for themselves.

In the Walpi Soyal ceremony the screen is missing. Instead we have there the rites already alluded to with the image of the serpent.

In the initiation ceremony of the Oraibi Powamu[3] the same moon-serpent symbolism is used in connection with the "*pota*."

> This consists of round discs, each of which is made of two sticks bent into a semicircle and over which is stretched a piece of owa (canvas). These discs are sewn together in the middle in such a manner that they can be opened and closed like a book.[4]

A dance is performed before the novices in which the different segments of the *pota* are opened successively so that the various symbols drawn on these segments become visible.[5] They are reproduced by Voth.[6] All of them obviously pertain to fertility.

[1] 91, Plate 28.

[2] 91, p. 53.

[3] According to Mindeleff (75, p. 129) "Powamu" means "fructifying moon."

[4] 88, p. 89.

[5] 88, p. 92.

[6] 88, Plate 48.

They consist of symbols of squash blossoms,[1] clouds, and corn ears. One segment is expressly called the moon and consists of the same symbol as the moon on the screen described above, having a serpent-like animal drawn in the shape of a semicircle in the disk.

Corresponding to the idea of the emergence of the people from the underworld, the one of the dead returning to the place of emergence is quite common in the Southwest, if not indeed general. It is well known from the Navajo[2] and Apache.[3] Among the Pueblo[4] it stands out prominently and, what is especially interesting, has become associated with the idea of fertilization. The traditional *sipapu* is, as said before, in some cases conceived as a lake or a *lagune*. In such cases the dead are thought to return to their home in the lake.[5] The *sipapu* or the lake is, however, not

[1] The squash blossom symbol consists of a circle divided into eight sectors. It is also quite frequent in Zuñi, where it is painted, for example, on the sides of the masks of the Sälämobiya, the "Seed-gatherers" of the six regions. See 83, Plate 21.

[2] 70, p. 38.

[3] 58, p. 194; 79, p. 255.

[4] 61, p. 299. Dr. Spinden kindly gave me the following information concerning the Rio Grande Tewa: "The dead return to the underworld through the great *sipapu* or one of the numerous smaller entrances."

[5] 1, p. 315; the dead of the Jemez return to the *lagune*. According to the Zuñi emergence and migration myth recorded by Mrs. Stevenson the traditional *sipapu* and the sacred lake, Kothluwalawa, are not identical. This lake was created magically by Siwulutsiwa after his unlawful connubium with his sister (see 85, p. 32–33; 7, p. 404–5). When the Zuñi some time *after* their emergence came to this lake, various clans dropped their children into its waters. The children at once were deified and became Kokko. Their home is in the lake and is not only the place of the dead, but also that of the unborn (Cushing). This is in contradiction to the other Zuñi notion, that the dead, upon reaching the lake, "descends the mystic ladder to meet the Council of the Gods, and *thence passes* on to the undermost world, the place of Zuñi nativity" (85, p. 307–8). From this obvious contradiction, as well as from the general identification of the *sipapu* or lake and the place of the dead in an area continuous to that of the Zuñi, I judge that we are justified in also identifying Kothluwalawa with the real place of emergence of the Zuñi and thus in regarding the Zuñi migration myth of today as involving a secondary and inconsistent complication.

The change that has taken place can probably be ascertained by comparing the Zuñi with the Navajo version of the emergence and migration myth. These are even in details strikingly similar. From a comparison it would appear that that part of the Zuñi version which recounts the events from the emergence to the crossing of Kothluwalawa, originally took place in the last underworld, so that the events at Kothluwalawa would correspond to the emergence to the uppermost world. Thus, the motive of the blood-crime of a brother and a sister and of the birth of their defective children,

only the place of the dead, but also that of the unborn.[1] This strengthens the supposition of a physiological association of the *sipapu*.

Another cycle of associations deserves being mentioned at this place. When one considers that "the Hopi connects the idea of life with the east, death with the west," [2] that every newborn baby must be shown to the rising sun, that the dead of the Hopi travel westward, and finally that the sun in the evening descends into the underworld by way of the *sipapu* of the kiva of the Earth-goddess, it seems warranted to suppose that there is a certain parallelism in the mind of the natives between the fates of the sun and those of the individual. The sun and the individual both return through the *sipapu* to the underworld whence they came.[3] The association is obvious and, at least as far as the Hopi are concerned, is borne out by the empirical data. It would be premature to be more specific in our statements, on account of the incompleteness of our own information and on account of the probable vagueness of the association in the mind of the natives themselves.

Since the dead return to the underworld and the underworld is the place of germination, it is not surprising that in a culture like that of the Pueblo, where almost every cultural phenomenon seems to be focused on the idea of fertilization, the deceased and especially the ancients should likewise have become associated with this idea.[4] This is brought out in the well-known Katcina worship of the Pueblo. From the ideas we find associated with this worship today we cannot, of course, draw any inferences whatsoever as to its probable origin or its historical development. But the associations themselves offer a psychological problem.

a motive almost identical in both versions, takes place in the Zuñi version on the surface of the earth and before the lake episode, while according to the Navajo version in the last underworld before the emergence (see Matthews: Navaho Legends).

[1] 32, p. 162.

[2] 90, p. 311, and 88, p. 103.

[3] According to Fewkes the underworld is the house of the sun and the earth-goddess. "Here are generated the souls of the newly born on earth, and to this home of the Sun return the spirits of the dead." See 40, p. 86.

[4] 91, p. 57 (footnote): Pahos are made for the deceased, so that they may send good crops to the living.

The Katcinas of the Hopi are the deified spirits of the ancients who now work for the good of the present generations.[1] The usual idea seems to be that the Katcinas are rain-makers. "You have become a Katcina: bring us rain," say the relatives of the deceased to the dead, before they inter them.[2] Correspondingly, "the deceased Zuñi become rain-makers, and are at the command of the council of the gods."[3] The Zuñi claim that they always buried their dead. They insist that should they incinerate the bodies, there would be no rain, for their dead are the *uwannami* (rain-makers)."[4] The Zuñi Kokko, who correspond to the Hopi Katcinas, are the deified ancients of the Kotikili and are thought to reside in the sacred lake. They are children of certain Zuñi clans and were dropped into the water of Kothluwalawa when their mothers crossed this lake in the mythic times. These Kokko or ancients intercede with the gods that they may send rain and fertility to the people.[5] The Korkokshi who belong to the Kokko are "dancers for good," i. e., for rain.[6]

The Katcinas of the Rio Grande Tewa are evidently conceived in a way similar to those of the Hopi and Zuñi. Dr. Spinden kindly gave me the following information concerning them:—

> The Katcinas, or 'Okhuwa, as they are called in Tewa, are primarily those of the first people who did not come out of the underworld with P'o seyemu. The dead return to become 'Okhuwa and the child is an 'Okhuwa until four days old—or until the christening. The 'Okhuwa are probably to be regarded as ancestral spirits. The word is very like the ordinary word for "cloud" and the 'Okhuwa live in the clouds as well as in the underworld. Their function is connected with rain and fertilization. When the 'Okhuwa come to bring seeds and rain they come out of a lake.

The Hopi regard the earth-goddess, Hahaiwuqti, as the mother of the Katcinas.[7] The Sia Katcinas are created in the underworld by Utset, obviously likewise an earth-goddess. After the emergence Utset sent them to live in the west.[8]

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[1] 31, p. 130; 27, p. 351; 6, p. 189.

[2] 40, p. 82; 32, p. 162; 39, p. 443 (footnote).

[3] 84, p. 40.

[4] 85, p. 305.

[5] 83, p. 541–2; 6, p. 189.

[6] 85, p. 63.

[7] 96, p. 266; 34, p. 49; 51, p. 178.

[8] 82, p. 116–7.

The Katcinas are thought to be present in the villages of the Hopi from midwinter until July. During this time they are represented by masked personators in the so-called Katcina dances. They depart for the year after the Niman ceremony. The personators leave the village and proceed towards the west, since the Katcinas are now supposed to return to the underworld, "the entrance to which is the sun house in the west." [1]

While the place where the sun sets is so to say, the traditional home of the Katcinas, it is not the only locality with which the same idea is associated. We have already mentioned the identification of the different "*sipapus*." Thus the Rain-makers of the Zuñi are thought of as living in the underworld below the *sipapu* of the ceremonial chamber.[2] Through this opening they are supposed to come up.[3] (See above: Müyiñwû, the God of Germination, also lives under the *sipapu* of the kivas and sends through it the germs of all living things.)

Illustrative of the ideas regarding the nature of the Katcinas is a rite performed in the Walpi New Fire ceremony. In this a procession of the phallic societies of Tataukyamu and Wüwütcimtu proceeds to the site of ruined Old Walpi, the abode of the ancestors of the present Walpians. At least in the rite referred to, this site is regarded as one great *sipapu*, under which the ancients, the ancestors of the present Hopi, now live as Katcinas.

Patting his foot on the ground, one of the men in the procession said, pointing downward, "Here, just below here, the old people dwell. We are now," he continued, "praying to them for material prosperity—rain, health, abundant harvest.[4]

The psychologically important point brought out by this rite is that the abode of the Katcinas may also be located, by a clear series of associations, in the old historical homes of the natives.

[1] 27, p. 366; 40, p. 91.

[2] The Tewa of the Rio Grande seem to have an idea very closely analogous to the one in question. Dr. Spinden writes me: "The Tewa *na^{n}si pu phendi'i* is a lake in the north out of which grew a pine tree. In the center of each plaza is a shrine which represents it. When P'o seyemu first came out he found the earth good and he danced. The people below heard him and for that reason they now dance near this shrine that the people below can hear them."

[3] 85, p. 146.

[4] 35, p. 96; 36, p. 526–7.

By this association the old ruins gain especial sacredness in the cults of fertilization. The fact that phallic societies perform the rite mentioned above is very likely not accidental.

In order to avoid misrepresentations it is necessary to say that, while the ideas outlined above seem to be an essential part of the Pueblo Katcina worship, by far not all of the beings that appear in the Katcina dances as we see them them today can be interpreted as deified ancestors. The Katcinas are a most heterogeneous crowd.[1] The investigation of the origin and development of the Katcina cults and of the phenomena of assimilation and reinterpretation which have doubtlessly taken place, as well as the discrimination of primary and secondary elements necessarily fall outside of the scope of our considerations.

The most conspicuous mythological cycle of the Southwest is that referring to the Twin War Gods. This cycle of myths seems to be most elaborately developed by the various Pueblo peoples and by the Navajo. The following gives in a general way the essential elements. The sun impregnates by magical means a woman, who is obviously an Earth-goddess. She gives birth to twins, who mature rapidly, but always remain diminutive. They go to visit their father, the Sun; after subjecting them to a series of ordeals, he gives them the weapons of war; with these the boys rid the earth of monsters.

This myth or cycle of myths is characteristically Southwestern and thus distinct from the twin-hero tales of the Plains, namely the cycle of Lodge-Boy and Thrown-Away.[2] I do not mean to doubt that there are elements common to both cycles, as Lowie has pointed out,[3] but the general associations of events and ideas are unmistakably distinct. In the Northern Shoshoni[4] and Blackfoot[5] versions of the Plains a strange visitor kills the mother of the boys and then takes them out of her womb. While the boys are playing hoop-and-pole, the father forbids them to roll the hoop in a certain

[1] 26, p. 16; 40, p. 83.

[2] 66, p. 139–143.

[3] 66, p. 119.

[4] 65, p. 280 et seq.

[5] 95, p. 40–53.

direction. The boys disobey and the hoop rolls on and on until it reaches a cannibal, who fails in his attempt to destroy the boys.

According to Goddard, the San Carlos and Mescalero Apache have practically the same hero cycle as the Navajo.[1] The versions of the Jicarilla Apache, however, show interesting fusions of elements from the Southwest and from the Plains. Thus the genesis of the boys,[2] their visit to their father, the Sun, and the jealousy of his wife[3] are clearly identifiable with the Pueblo-Navajo versions. But associated with these elements we find that of the hoop rolling to a cannibal, which is identical with the corresponding part of the Blackfoot myth, and that of the rolling rock, which is so typical of the Plains.[4] These transitional forms of the Jicarilla mythology are interesting, but not surprising, when one considers that the Jicarilla undertook regular and extensive hunting trips out into the Plains. Much of their material culture also points to the Plains, such as their tipis, beadwork, and parfleches.

After this brief general survey, let us return to the Pueblo-Navajo hero myth. According to the Sia version, a virgin, the daughter of Spider Woman, is embraced by the Sun. She gives birth to two boys, Ma-a-sewe and Uyuuyewe.[5] In the Navajo version the twins are born by two sisters, Estsanatlehi, "the Woman Who Changes," and "White Shell Woman." The one becomes pregnant from the rays of the rising sun, the other from the water of a waterfall.[6] In the Tusayan version the War Gods are "conceived by an Earth-goddess, one by a ray of sunlight, and one by a jet of water."[7] The Zuñi myth of Cushing lets some foam of water, impregnated by the sun, give birth to the twins.[8] The

[1] 59, p. 386.

[2] 76, p. 200.

[3] 58, p. 196.

[4] 76, p. 208.

[5] 82, p. 43.

[6] 70, p. 105–6.

[7] 46, p. 132.

[8] 8, p. 1–2; 7, p. 381–2. Possibly the idea of the impregnation of water by the sun corresponds to the ceremonial act of reflecting a sunbeam into the water of a medicine-bowl by means of a crystal.—a rite commonly reported from Tusayan. The liquid of these bowls is whipped to foam.

version related by Mrs. Stevenson is somewhat complicated by the fact that there are two generations of twins. At a certain point in the migration myths the second generation takes the place of the first one without any obvious motive.[1]

The fact that in some versions the earth-goddess herself ("Woman who Changes," Spider Woman, etc.), in others, her daughter is the mother of the twins is certainly of no importance, just as among the San Carlos Apache the "Woman Who Changes" is sometimes the mother of the wife of the sun, sometimes his wife herself.[2] The mode of genesis of the twins, as related in the versions cited above, is doubtlessly associated with the idea of the fertilization of the earth by the sun and by water. Whether this association is a primary feature of the myth cycle in question, I do not venture to decide. It is certainly typical of the Pueblo and not of the Navajo and Apache, for, judging from what we know of these peoples, we assume that they either borrowed the myths of the Twin War Gods passively from the Pueblo or modified their own myths by assimilating Pueblo elements.

The two boys, wishing to become acquainted with their father, visit him in his sun-house. They, of course, survive the ordeals they are subjected to and thus prove themselves to be the real children of the sun. Whereupon, their father presents them with the typical weapons of war, bows, arrows, and shields. Thus equipped, they set out to destroy the enemies of mankind. According to most versions, this is clearly their *raison d'être*. They overcome the monsters who have been harassing the people,[3] rescue maidens from the clutches of cannibals,[4] and perform many similar acts of heroism.

Some Zuñi myths also relate how the sun sent the twins into the earth to lead the people forth to the surface. "The two rent the earth with their lightning arrows and descended into Fourth World."[5] Then, according to Cushing, they guided the people

[1] 85, p. 24, 35, 407.

[2] Personal information from Dr. Goddard.

[3] 82, p. 45 et seq.; 89, p. 82; 2, p. 587.

[4] 11, p. 365 et seq.; 69, p. 200.

[5] 84, p. 34.

through the various stages of gestation and parturition.[1] Since the Twin War Gods are constantly associated with lightning, the question arises, whether in this feature there is a suggestion of the fertilization of the earth by the lightning resulting in the birth of mankind. The records of Mrs. Stevenson and Cushing are certainly suggestive of this association. On account of the fragmentary nature of the Zuñi material, however, we can say nothing definitely. It is certainly an interesting question for future investigation.

When speaking of the Hopi war gods, of Püükon and his less important brother, it is necessary to bear in mind that corresponding to the multiplicity of Hopi Earth-goddesses, who are all more or less identical, there is also a multiplicity of culture-heroes of the type in question. This is probably due to the development of esoteric mythologies, which after all do not seem to surpass the limited wealth of motives extant in the general mythology of the people. Alosaka, for example, is the culture hero of the Aaltû society. He is said "to have been miraculously born of a virgin. His father was the Sun, his mother an earth-goddess, sometimes called a maiden. Like many gods, he travelled on the rainbow."[2] The identity with Püükon is unmistakable. In addition to the coincidence of mythological motives, these counterparts of Püükon are identified by their associations with the idea of fertilization.

The heterogeneity of the associations of the Twin War Gods is from a psychological point of view an important consideration in the discussion of these beings. They are war gods par excellence but are at the same time intrinsically associated with fertilization. This duality of their functions is characteristic of Pueblo culture and speaks for the occurrence of secondary associations.

The warrior nature of the twins is a marked feature of the Pueblo myths, probably especially of the Zuñi migration myths. In the ceremonial life it is also prominent, for example, in the war festivals of Tusayan.[3] The dual nature of their associations is brought out clearly by contrast in the case of the Warrior society[4]

[1] 7, p. 382–3.

[2] 36, p. 539.

[3] 43, p. 482–94.

[4] 82, p. 121 et seq.

and the Knife society[1] of the Sia. These societies are closely allied and both are directly associated with the Twin War Gods. Nevertheless, such diverse performances as war dances with scalps and ceremonials for rain characterize them.

Like the Sia Society of Warriors, the Zuñi Priests of the Bow regard themselves as the direct successors of the Twin War Gods, the organizers of their society.[2] That this Zuñi society is really one of warriors is proven by the fact that before the cessation of intertribal war the killing of an enemy and the taking of his scalp was necessary for admission.[3] At the same time, we find that the Priests of the Bow, by far the most prominent of Zuñi societies, are everywhere unmistakably associated with the idea of rain and thus of fertility. This dominant power in Zuñi is composed of the elder and younger Bow priests, who are the direct representatives of the Twin War Gods, six Ashiwanni, Rain-priests, and one woman, Shiwanokia, the Priestess of Fecundity.[4] This composition of the society is significant. The lightning-makers of the six regions, the deities of the fertilizing rains, are deceased Bow priests.[5] (Compare the corresponding idea associated with the Katcina worship.)

The Keres believe that the meeting of the Twin War Gods in the clouds causes rain to fall. They are personified in the war captain and his lieutenant.[6] In Zuñi idols of the War Gods are regarded effective in a similar way. Ceremonies are performed before them "that they may intercede with the rain-makers for rains to fructify the earth."[7] The idols found in the shrines on the sacred mesa near Zuñi are significant.[8] A specimen in the Berlin Museum (No. IV, C. 7117) has been reproduced and described by Cushing.[9] The head of this idol is covered with a white cone-

[1] 82, p. 101 et seq.

[2] 85, p. 576.

[3] 85, p. 578. In the Berlin Musuem (No. IV C7149) there is a symbolic shield used in the sacred war dance by the Priests of the Bow. It is characteristic that a prominent symbol of this shield is the Great Water Serpent painted on it.

[4] 85, p. 289.

[5] 85, p. 110 and p. 149.

[6] 1, p. 289.

[7] 85, p. 116.

[8] 85, plates 137–9.

[9] 10, p. 2.

shaped cap called the cap of fog or clouds. A lightning shaft shoots out of the apex of the cap. A noteworthy feature is the

serrated projection from the umbilicus to which plumes are attached, symbolic of clouds and lightning. All varieties of seeds are deposited in the cavity before the projection is inserted.[1]

Cushing and Mrs. Stevenson call it the navel.[2] Judging from other phenomena in the culture of the Pueblo, one would be inclined to speak rather of a phallic significance. However this may be, the association of the idol of the War God with fertilization is evident.

Among the Hopi the Society of the Kalektaka or Warriors corresponds to the Zuñi Priesthood of the Bow, without, however, exercising authoritative control of the whole ceremonial life as among the Zuñi. It is likewise a real warrior society and has its special war ceremony.[3] Püükon[4] is their culture hero and his image is in the care of the chief of this society.[5] It is almost needless to say that this society, like all other Hopi societies, is in addition to its martial functions constantly bent on the production of fertility.

According to Voth[6] the members of the Snake society are also kalektakas. Fewkes speaks only of one man who in the Snake-Antelope ceremony personates "a kalektaka, or warrior, or Püükon."[7]

One of the most conspicuous men in the line of Snake priests personified a warrior, who wore on his head a closefitting, open-mesh, cotton skull-cap, which represents the ancient war-bonnet.[8]

This kalektaka, in the snake dance proper, sits in the kisi and hands out the snakes to the dancers. This specific rite, like all others of the Snake-Antelope ceremony, is certainly associated with the idea of rain and fertilization. The kalektaka is always represented as twirling the bull-roarer, which among the Pueblo is a magic instrument for producing rain.

[1] 85, p. 113.

[2] 85, p. 607.

[3] 26, p. 25.

[4] The brother of Püükon, although known and often referred to in Hopi mythology, in the ceremonies plays a rôle very inconspicuous in comparison to that of his elder brother.

[5] 38, p. 7.

[6] 90, p. 343.

[7] 44, p. 985.

[8] 44, p. 975.

Nowhere does the assimilation of the war-gods and of their representatives, the warriors, by the idea of fertilization appear more clearly than in the case of their weapons. In the myths the war-gods receive from their father the bow and arrows or lightning bolts as real weapons of war, to be used in their fight against enemies and monsters. In the ceremonies, however, we find just the reverse associations with lightning; there the lightning is not the destructive arrow of war, but the rain-bringing, fertilizing phenomenon. It is ceremonially represented by the lightning frame. The association of this device with the idea of fertilization is borne out by the facts. Thus in the Hopi Palülükoñti ceremony personators of the cloud deities, besides asperging the women and throwing water upon the hatchway of the kivas, shoot their lightning frames down into each kiva.[1] In the Hopi ceremony of Coyohim-katcina ("All-katcina") a personator of Püükon uses the bull-roarer and the lightning frame.[2] In the Walpi and Mishongnovi Snake-Antelope ceremony the kalektakas, besides twirling their bull-roarers, as stated above, also shoot off lightning frames.[3] In the Oraibi Snake altar these objects lie before the figure of Püükon.[4]

The shield of the war-gods still remains to be spoken of. According to the Zuñi myths it is spun of clouds resembling cotton.[5] In the ceremonies this shield is represented by hoops with cotton netting. As will be discussed in the following pages, these netted wheels have an extensive ceremonial use and are in the mind of the Pueblo specifically associated with rain and fertility. The Hopi and Zuñi images of the war-gods are supplied with such a shield consisting of a netted wheel. Either it is made to hang over the back of the image or the image stands on it.[6]

The offering of the Zuñi Priests of the Bow to the war-gods

[1] 29, p. 278.

[2] 38, p. 66–7.

[3] 12, p. 228.

[4] 90, p. 287–8.

[5] 84, p. 34; 9, p. 52. Unspun cotton is commonly used in Pueblo ceremonies to represent clouds.

[6] 88, p. 77; 90, p. 287–8; 85, p. 113.

consists of a stick to which a netted wheel and small bow and arrows are attached.[1] This is a petition for rain. The Huichol of northern Mexico, whose sacrificial arrows[2] are genetically clearly related to the offerings of the Pueblo, make a sacrifice to their god "Great-grandfather-Deer-Tail," which consists of an arrow and an attached netted hoop,[3] and is thus morphologically parallel to the typical offering of the Zuñi Priests of the Bow. The Huichol, however, do not associate this hoop with the cloud shield of the Twin War Gods, although beings of a corresponding type are represented in their mythology, but interpret it as "a snare for killing deer." The object of this petition of the Huichol is obvious. We are here dealing with a clear case of discrepancy in the distribution of the objective features of a cultural phenomenon and of its psychological associations. The specific associations of the hoop, that are characteristic of the Hopi and Zuñi in contradistinction to its associations among other tribes, warrant the reality of the definite and typical psychological attitude of the people under consideration,—an attitude which may be roughly characterized by the idea of fertilization.

Of equal psychological significance, as the fusion of the myth motives of the Twin War Gods with the idea of fertilization in the culture of the Pueblo, is the lack of such associations in the Navajo culture. Although the mythological traits and actions of the Navajo Twin War Gods are identical with those of the Hopi and Zuñi myths and although these beings are personated in the Navajo ceremonies, the religious associations into which they enter are fundamentally different from those characteristic of the Pueblo. Speaking of the Elder God of War Matthews says:—

> When properly propitiated, he is prompt to cure disease, particularly such as is produced by witchcraft. Men in danger, and warriors going to battle, pray and sing to him.[4]

In correspondence to what is avowedly the fundamental tone of Navajo ceremonial life in general, the associations of the war-gods

[1] 41, p. 92–3.
[2] 77, p. 100–2.
[3] 68, p. 94, 103–5.
[4] 71, p. 20.

seem to pertain to the healing of the sick. This is brought out by the prayers and the rites around the patient.[1] The question, why the Navajo, who have doubtlessly borrowed the myth motives of the war-gods from the Pueblo, did not also borrow the associated ceremonial concepts, is a problem of the psychology of acculturation, which is only soluble by an analysis of the specific historical and psychological phenomena involved.

The wheel or hoop with its extensive ceremonial use among the Pueblo lends itself readily for a concrete demonstration of the points brought out in this paper. Hence it deserves a detailed discussion. The hoop used in a Zuñi ceremony for rain is spoken of by Mrs. Stevenson as a world symbol.[2] This symbolic meaning seems to be supported by the fact that in Tusayan clan signs of the earth consist of a circle.[3] Furthermore, in Southern California,[4] the same world symbol is used in the initiation ceremonies and among the Tarahumare [5] is associated with the peyote cult. While this specific symbolic significance of the wheel seems suggestive when taken in connection with the obvious association of the wheel to the female sex and its alleged physiological association, it certainly does not by means of a premature generalization admit of a genetic interpretation as to the origin of the wheel any more than does the association of the wheel with the shield of the war-god. The interpretation given by the Hopi of today of the wheels and the cylinders that are commonly associated with them is that they represent the small clay rolls that the rain water forms in the washes.

They are considered to be special prayer offerings that the washes may rise and flood their thirsty fields.[6]

In spite of the secondary nature of this Indian interpretation, it is significant as showing the conscious association of the wheels and cylinders with rain and fertility in the mind of the present natives.

In the case of the Antelope altar of the Walpi Snake-Antelope

[1] 71, p. 84–5, 138–9, 303.

[2] 85, p. 198.

[3] 36, p. 526; 45, p. 5; 48, p. 410.

[4] 94, p. 300 et seq.; 19, p. 177–8.

[5] 67, vol. I, p. 365.

[6] 90, p. 314; 12, p. 235.

ceremony we find an interesting association of the cylinders and wheels with the sexes. In the sand-painting of this altar four lightning-snakes are depicted as shooting out from rain-clouds. Those of the north and south are male and those of the east and west female. A small black cylinder of wood is laid on the head of each male snake and an annulet made of a flag-leaf on the head of each female snake.[1]

The idea of fertilization appears furthermore in the following phase of the Oraibi Snake ceremony. On the seventh day of the rites the Antelope chief prepares two small black cylinders like those of the Walpi altar. He also makes two wheels of the leaves of the "wipo" (flag), a species of reed found near springs and *lagunes*.[2] One cylinder and one wheel were tied to each of two black sticks (chochokpi).[3] During the races, which take place at sunrise of the of the eighth and ninth days, a water vessel, which has been previously filled at a spring, and a chochokpi with its cylinder and wheel are passed on in such a way that they are always carried by the runner who happens to lead. The final winner runs into the Antelope kiva with the objects. Here the Antelope and Snake chiefs pray over the netted gourd and the chochokpi. These are then handed back to the winner, who takes them down to his fields, digs a hole, pours the water of the gourd into it and buries his cylinder and wheel.[4] This is considered to be a special blessing for the fields.

Racing of various kinds is a common feature of American tribal life. Their specific associations in the Pueblo area are of special interest to us. Ceremonial races for rain and fertility stand out very prominently in the religious life of the Pueblo. The Zuñi race with wooden cylinders that resemble the Hopi cylinders just described. Ceremonial races of this kind "take place some days previous to corn planting."[5] They "are for rains to water the

[1] 37, p. 21.

[2] Flags of this kind are also used ceremonially in the rain dances of the Zuñi. See 42, p. 26.

[3] 90, p. 317.

[4] 90, p. 325–7. A similar race takes place in the Mishongnovi Snake-Antelope ceremony. A ring plays the same rôle and is deposited by the winner in his field. The runners start from four conventionalized cloud-and-rain symbols drawn in meal upon the ground. See 12, p. 230–3.

[5] 85, p. 318–21; 60, p. 227.

earth that the crops may grow."[1] The races are accompanied by prayers to the rain-makers. In another Zuñi race clowns, or "mud-heads," and women take part as rivals. The men race with a kicking-billet, while the women toss a ring.[2] "This game is played only by order of the Great Father Koyemshi, and is used exclusively to bring rain."[3] The Keres have a race in which two billets are kicked. The one is called a "man," the other "woman." This game is played for rain. "The winning stick is buried in a corn-field."[4]

In passing, it is interesting to state that in addition to the instances mentioned other American games, themselves in no way characteristic of the Pueblo, are among these people likewise ceremonially associated with the production of rain and fertility. This is the case, for example, with the Zuñi dice game described by Mrs. Stevenson.[5] As Dr. Spinden kindly informs me, the great ceremonial game of the Rio Grande Tewa connected with germination is the shinney game.

In the Hopi Flute ceremony the cylinder and annulet or wheel are important ceremonial features. This ceremony is, as is well-known, complementary to the Snake-Antelope ceremony, with which it alternates annually. The desire for rain as the controlling motive of the ceremony appears not only in its correlation to the Snake-Antelope ceremony, but also by virtue of its own features.

In the Walpi Flute ceremony the Flute Priests, led by their chief, leave the village on the seventh day. They take with them paho-offerings as well as cylinders and annulets. At various springs they deposit the pahos and, after having stayed out all night, start back for the village on the following day. At the entrance of the village they encounter a line of meal placed across the trail. This is the symbolic way of closing the trail. The Flutes meet the Bear Chief and the Antelope-Snake Chief, who stand on the other side of the line of meal with a boy and two girls. The Flutes wish to enter

[1] 86, p. 469.
[2] 86, p. 493–4; 5, p. 696–7.
[3] 85, p. 345–6.
[4] 5, p. 668.
[5] 85, p. 328 et seq.; 86, p. 480 et seq.

the village. The Bear Chief replies that if the Flutes are the good people they pretend to be, they can bring rain. Thereupon the Flute Chief gives to the boy a cylinder on a stick and to each girl an annulet. The cylinder and the annulets correspond exactly to those used in the Snake-Antelope ceremony. The trail is now "opened" by erasing the obstructive line of meal and the Flute band enters the village.[1] Fewkes considers this rite to be a dramatization of a purely historical event, namely of the coming of the Flute people to Old Walpi and their reception by the Bears and Snakes.[2] If this really should be the correct genetical explanation, the prominence of the secondary assimilation of the idea of fertilization would be all the more remarkable. The symbolic significance of the rites in question is, aside from what may have given the primary historical impetus, quite unequivocal.

The magical meaning of the annulets used in the Flute ceremony is also brought out by the fact that one or more live water-insects are bound into the flag-leaves of which they are made.[3] The same trend of associations is evidently involved, when duck feathers are attached to the cylinders and rings, the duck being conceived by the Hopi as a rain-bringing animal.

On the ninth day of the Walpi Flute observance a boy personating Alosaka, the counterpart, as we have seen, of Püükon, the war-god, two Flute girls, one Flute boy, several priests, and a warrior go to Tawapa ("Sun-spring"). Here one of the priests wades into the water, plants a paho in the bed of the spring, and brings out a handful of mud. This he smears on the cylinder and annulets, which have been whitened before the band left the kiva. Mud and dirt have for the Hopi an association with fertility, as might be demonstrated in detail in a discussion of the clowns or "mud-heads" and their various rites. When departing from the spring, Alosaka draws four cloud symbols in meal on the ground. The procession proceeds from one symbol to the next led by the two Flute girls and the one Flute boy. The girls carry each an

[1] 53, p. 281–3.

[2] 53, p. 287; 47, p. 591–2; 48, p. 401.

[3] 38, p. 131–2.

annulet on a stick, the boy carries a cylinder. The children advance by throwing their respective objects upon a meal symbol, picking them up and then proceeding to the next symbol to repeat the performance. The rest follow. As the procession marches to the village, it halts at intervals to repeat the performance. At the so-called "kisi" in the village plaza the final act of the whole Flute ceremony takes place. The kisi is a lodge made of cottonwood boughs. Here the procession halts and sings. The participants close the performance by depositing offerings, gourd vessels filled at the spring, and the cylinder and annulets just discussed in the kisi-shrine.[1] It is important to mention that the kisi is erected over the plaza shrine, since this shrine is spoken of as an entrance to the underworld. This reminds us of what has already been said of the underworld as the place of fertility and the abode of the gods of germination, to which ceremonial *sipapus* and springs offer a passage of communication.

The Shipaulovi variation of the spring and kisi rite of the Flute ceremony is equally suggestive. Before the procession to the village, a priest personating Omowûh, the God of Rain-clouds, merges into the spring, plants pahos in the bed thereof, and brings up two bundles, which have been deposited there at a previous occasion. The contents of each bundle are as follows: "a planting-stick, three long black pahos, two annulets, one cylinder, two spherical water gourds with a string netting."[2] These objects are, like at Walpi, deposited in the kisi by Omowûh.[3]

Similar offerings are made in the one day ceremony (*tawa baholawu*) of the Oraibi Drab Flute society. At this occasion imitated corn-ears, pahos, food-balls, black annulets and black cylinders with attached duck feathers are deposited at various shrines and springs.[4]

Since springs and at least some of the shrines are regarded as passages to the underworld, as *sipapus* in the broader sense of the word, I cannot help but correlate directly the various offerings just

[1] 53, p. 285–6; 21, p. 141.

[2] 38, p. 137.

[3] 38, p. 147.

[4] 93, p. 129–33.

described with those that are deposited in the *sipapu* of the ceremonial chambers. Essentially the same concepts seem to be involved as when the Zuñi deposit a diminutive dart and ring game,[1] grains of corn, and squash and melon seeds in the *sipapu* of a ceremonial chamber and pray for rain, prosperity and general well-being.[2]

The final act of the Hopi Niman Katcina is of interest with reference to the ceremonial use of the cylinder and annulet, as well as to the idea of the *sipapu*. The Niman is the last Katcina ceremony of the year. In fact, it celebrates the annual departure of the Katcinas from the Hopi villages. The Katcina, the clan-ancients and workers for fertilization are supposed to stay with the Hopi from the winter to July. They are led back to their traditional home by their leader, Eototo, the germ god, the ruler of the underworld. Personators dramatize this departure by leaving the village over the western trail, which is supposed to lead to the traditional home of the Katcinas, the entrance to the underworld and the place where the sun sets.[3]

During the early part of the Niman small black cylinders and annulets like those of the Flute ceremony are made. The cylinders are tied to the wrists of the Heheakatcinas[4] in the public dances.[5] The annulets are used in the final rites under discussion.[6] After cloud symbols have been drawn at the hatchway of the main kiva, Eototo, carrying a planting-stick, and three Katcinas enter the plaza at sunrise and take a stand at the four sides of the sky-hole of the kiva. One of the priests of the kiva stands on the ladder, being only partly emerged from the hatchway. He throws sacred meal towards the north where Eototo stands. When the meal touches his garment, Eototo lays his annulet on a cloud symbol. After repeated sprinkling of meal by the priest, Eototo finally

[1] This game, as we shall see presently, is played ceremonially for rain and fertility.

[2] 85, p. 247.

[3] 49, p. 19–20.

[4] These Katcinas have a marked phallic association.

[5] 38, p. 72.

[6] The observations of Fewkes were made in Walpi and Shipaulovi and are complementary: see 38, p. 89 et seq., and p. 100 et seq.

passes the ring down into the kiva. The same performance is repeated towards the other three sides where the Katcinas stand. The annulet offerings are laid before the altar. The whole series of performances is then repeated with water which the men outside pour into a bowl held by the man on the ladder. In return pahos are offered to Eototo and the Katcinas. During all this time two priests down in the kiva sit by the *sipapu*, the opening to the underworld, chant, rattle, and occasionally knock on this sacred orifice.

In the Tusayan Mamzrauti ceremony a paho consisting of a black stick to which a black annulet of twisted flag-leaves is attached is thrown into a spring. It is said to be an offering to Müyiñwû, the God of Germination.[1]

In the preceding discussions we have repeatedly spoken of small cylinders and their associations among the Hopi with the idea of fertilization. They are frequently, as we have seen, associated complementarily according to sex with annulets or wheels. This association, interesting as it may be psychologically, reveals no evidence with reference to the historical genesis of the phenomena. The cylinders are also used alone as kicking billets in races for rain and the wheels are likewise used independently. We have no evidence whatsoever for the historical genesis of either cylinder or annulet. On the other hand, however, we have direct evidence of the psychological associations pertaining to them among different tribes. This objective evidence shows that morphologically similar and obviously diffused cultural phenomena, such as the wheel, are assimilated in different cultural units by different psychological concepts and that the acculturation is determined by the quality of the setting of the individual cultural unit. We have already mentioned the association of the wheel among the Huichol with the chase. The Navajo associate it with the healing of the sick.[2] The corresponding Hopi and Zuñi concepts have been discussed in detail.

The same point appears with great clearness in the case of the dart and hoop game. This game has a huge area of distribution in

[1] 24, p. 228–9.

[2] 81, p. 238.

America, as described by Culin.[1] Due to the relative complexity of the phenomenon and the continuity of its occurrence, no one doubts the historical homogeneity of the game even if it be found among so many heterogeneous American tribes.

Can we find an explanation of its origin? Culin believes he has found a plausible one by identifying the hoop with the netted shield or "water-shield" of the Twin Gods of War. "The explanation of the origin and significance of the game of hoop and pole rests largely upon the identification of the hoop. The netted gaming hoop is readily seen to be the same as the netted shield, one of the attributes of the twin War Gods . . . of Zuñi mythology."[2] Culin here interprets the genesis of an objective cultural phenomenon —the hoop and pole game—by the accessory and specific psychological association—the hoop of the game with the shield of the god—which this phenomenon has found in one particular area. The choice of the association of one particular area from the great number of actual associations found in other areas is in itself arbitrary. But even if the area of the particular association in question were co-extensive with the total area of occurrence of the game, it would be unmethodological to use this association as an explanation of the origin of the objective phenomenon of the game as we have no criteria to prove the primary nature of this association. An association of this kind admits of no historical interpretation, but implies a psychological problem, which, it would seem to my mind, is of the greatest importance.

Within the wide area, in which the hoop and pole game occurs, we find comparatively small cultural units, which are characterized by a definite and singular complex of concepts associated with the game. The fact that the hoop and pole game is subject to different psychological assimilations in different cultural units cannot be understood "kulturhistorisch," as Graebner conceives this term, but only from the standpoint of the psychology of cultural setting. In the following I shall attempt to show that in the Plains and among the Hopi the hoop and pole or dart are found associated with two entirely distinct complexes of ideas.

[1] 5, p. 420–527.

[2] 5, p. 422–3.

The buffalo hunt, the characterizing feature of the culture of the Plains, predetermines, so to say, the associations of the hoop and pole or ring and javelin game. Speaking of the Arikara, Skidi, and Wichita, Dorsey says it is part of the ceremonial calling of the buffalo.[1] The Cheyenne call the game the "buffalo-game."[2] The Skidi and Arikara say that the sticks of the game were originally buffalo bulls, while the ring was a buffalo cow.[3] A very common and characteristic myth motive of the Plains tells of a poor, but wonderful boy who saves his people from starvation by a hoop-and-dart game magic. He shoots an arrow at the rolling wheel and at once the wheel changes into a buffalo and the arrow kills it. This he can repeat at will.[4]

In Tusayan, on the other hand, the hoop and pole game is ceremonially associated with the idea of the fertilization of the fields. This is brought out clearly in the public dances of the women's ceremonies of Walpi and Oraibi. Of these we have good information on the Oraibi and Walpi Mamzrauti, the Oraibi and Walpi Owakulti, and the Walpi Lalakonti. The public dance on the last day of all these ceremonies offers but slight variations of a general type. Since these variations, however, bring out the points under consideration with especial clearness, a brief description of them all may be of interest.

In the public dance of the Walpi Owakulti the women of the society form a ring on the plaza, facing each other. They hold basket trays with the concave side towards the center.

Two girls, dressed to personate the Owakulti maids, enter the plaza after the others have begun their songs. On the ground before them they roll netted hoops at which they throw objects made of corncobs with attached feathers. These girls also carry bundles of basket trays which they cast among the spectators who struggle for their possession.[5]

The feathered darts are those commonly used in this game. Before being used in this public performance, the two hoops hang over the idol of the Owakulti maid of the kiva altar.[6]

[1] 16, p. 7.

[2] 62, p. 163 and 170.

[3] 14, p. 344; 16, p. 94.

[4] 14, p. 85; 62, p. 170–1; 54, p. 148–9; 13, p. 370–1.

[5] 50, p. 223.

[6] 50, p. 218.

In the Oraibi Oaqöl ceremony[1] the two Oaqöl-manas are dressed in the kiva. The other female participants file out of the kiva and form a dance circle on the plaza. The chief priestess and three other women each carry a netted gourd vessel, all the others have trays like those used at Walpi. In the kiva the two manas in the meantime take the wheels and feathered darts from the altar, begin their game by rolling the wheels over the floor of the kiva and shoot the darts at them. This performance they repeat after having ascended to the plaza. The chief priest has by this time placed a bundle of trays in the center of the dance circle. The women of the circle begin to sing and dance. The trays are held with the concave side towards the center of the circle. The two Oaqöl-manas roll their wheels, shoot at them, pick up the implements, and repeat the performance. This they continue around the circle until they finally enter it. Here they open the said bundle and throw the trays in different directions outside of the circle. The men scramble for their possession.

In the Walpi Mamzrauti the women form on the plaza a semicircle open towards the east. In this case they hold, instead of trays, slab pahos with characteristic designs of rain clouds and of conventionalized corn ears.[2] Two maids are dressed to represent male personages and are equipped with bow and arrow. They begin their performance in the kiva by throwing a bundle of cornhusk and then shooting their arrows at it.[3] This they continue on the plaza. When they have reached the circle of dancers, they throw their bundle into it and shoot their arrows at it once more. Finally, they throw little nodules of sweet cornmeal and water from the circle to the spectators outside who scramble for their possession.[4] The act of shooting is said "to typify lightning striking in the corn-field, an event which is regarded as the acme of fertilization."[5]

In the Oraibi Marau ceremony the maids are again dressed as

[1] 92, p. 41–43.
[2] 24, p. 240.
[3] 23, p. 91.
[4] 24, p. 238–9.
[5] 24, p. 238–9.

men, representing two archers and two lancers. The archers are equipped with bow and arrows and have a bundle consisting of squash, melon, bean, and other vines.[1] Each lancer on the other hand has a long stick or lance and a simple ring without netting.[2] The women of the dance circle are supplied with cornstalks. The two archers are the first to emerge from the kiva. They advance while shooting their arrows at the bundle of vines. In this way they make their way around the circle and finally enter it. They are followed by the two lancers, who throw their long sticks repeatedly at the rings. When the lancers arrive at the dance circle, they throw their sticks and wheels over the dancers into the circle. At the close of the dance the archers and lancers throw balls made of sweet-corn meal and water from the inside of the circle to the spectators who scramble for them. After the departure of the dancers the cornstalks left by them on the plaza are also eagerly gathered up by the spectators.[3]

In the Walpi Lalakonti, finally, the women dancers again form a horseshoe-shaped figure in the plaza and sing.[4] Each dancer carries a flat basket. Two women dressed exactly alike are led forth from the kiva by a priest. With sacred meal he draws on the ground two parallel lines crossed by a third one. This figure Fewkes refers to at another place as a rain-cloud symbol.[5] The two women throw ears of corn with attached feathers into this figure. Repeating the drawing of the figure and the throwing of the corn the priest and the two women advance toward the ring of dancers. The last figure is drawn inside of the circle. The final act consists in throwing trays to the spectators.

The Hopi women's dances, of which but small parts have been very briefly indicated by me, show an identical setting and offer good objects for interpretation by way of comparison. The public performances in the various villages show identity of pattern, while the minute variations are significant for an understanding of

[1] 5, p. 426.
[2] 87, plate 22.
[3] 87, p. 65–7.
[4] 22, p. 128.
[5] 26, p. 118.

the psychological setting. Thus we find that the women of the dance circle use in strictly analogous phases of the rites basket trays, cornstalks, and slab-pahos with rain symbols interchangeably. Balls of cornmeal take the place of trays as cherished gifts of the maids to the spectators. Again the maids shoot either at a bundle of cornhusks, at gaming wheels, or at a bundle of squash, melon, and bean vines. The variation in which they throw ears of corn on rain cloud symbols is not less significant. The meaning of these rites is absolutely unmistakable and is accentuated by contrast when the ideas associated with the hoop and dart in the Plains are compared with those borne out in these women's dances of the Hopi.

The characteristic individuality of the Pueblo culture has always been tacitly recognized and has been ascribed in a vague way to environmental factors. This tacit recognition is, however, I think, of no scientific value. The phenomena involved are in reality open to scientific analysis, by which alone we can gain a comprehension of the psychological setting in question. In the foregoing considerations I have attempted an analysis of this kind by delineating definite phases of the culture of the Pueblo which show the characterizing psychological trend of this culture and the individuality of its setting. This individuality has been indicated heuristically by a catch-word,—"the idea of fertilization."

My considerations have been restricted to a limited number of phenomena which seemed to me to bring out the problems in point especially strikingly. Anyone who is familiar with the culture of the Pueblo Indians will, however, recognize at once that the same points which I have discussed might be further illustrated by numerous other examples and might be extended to other phases of Pueblo life. To state but one instance, the whole question of making and sacrificing prayer sticks,—a problem which in itself when studied in detail would suffice to justify the use of the term "idea of fertilization,"—has been neglected by me altogether.

The scope of our considerations may be summarized very briefly as follows: The idea of Sky-father and of his complement, Earth-mother, which, when considered independently, is by no

means restricted to the Pueblo, gains its characteristic connotations through the associations into which it enters in this culture. Important associations of this kind appear in the myths of the Snake society of the Hopi. The same idea is also associated with that of parturition and of the emergence of the people through the *sipapu*. A further link in the chain of associations is the idea of the *sipapu* as a *lagune* and of springs as the natural passages of communication with the gods of the underworld and of fertility. The water serpent is the deity of the fertilizing water of these springs, as well as God of the Underworld, the place of germination. The deceased return to the underworld whence they work for rain and fertility in the behalf of the living. This belief is an important psychological factor in the Katcina cult, without explaining its origin historically. The Twin War Gods offer a similar example of secondary psychological associations. These gods and their societies are associated with war, on the one hand, and with the idea of fertilization, on the other. Their weapons are simultaneously weapons of war and symbols of fertilization. The unequivocal meaning of the hoop or annulet, whether it be associated with the Twin War Gods or not, is always that of fertilization of the fields. Finally, the dart and wheel game, which is the game par excellence of the war-gods, is employed in the women's dances of the Hopi as magic of fertilization. The agricultural significance of this ceremonial use of the game among the Pueblo is especially striking when compared with the objectively identical, but psychologically heterogeneous, "buffalo game" of the Plains.

This summary indicates the common trend or setting of the Pueblo culture. That this setting is not comprehensible as a summation of diffused elements is proven by the reinterpretation of heterogeneous traits according to a uniform scheme of interrelated ideas. The problem of the cultural setting of the Pueblo is therefore a psychological one.

The above investigations could be further elaborated by a thorough comparison of the psychological setting of the Pueblo culture with that of other culture areas with reference to the various cultural phenomena under consideration. The intensive

analysis would thus be supplemented by an extensive comparison. While this has not been altogether neglected, no attempt at completeness in this respect has been made. The comparative points in question have in most cases been rather left to suggest themselves by way of implication.

Besides these limitations my considerations are incomplete in two other respects.

Firstly: While the Pueblo culture itself offers unusually favorable opportunities for studying the problems of cultural setting, the great mass of the ethnographical material from this area, especially that from Zuñi, has been collected in an unsatisfactory way on account of the one-sided point of view taken. Furthermore, the published material from the Rio Grande Pueblos is very meager. Our knowledge of the Pueblo culture *in toto* lacks uniformity and the objective and critical valuation of the material found in the literature is frequently quite impossible. These conditions have of course affected our own discussions.

Secondly: In a very brief presentation of the analysis of complex cultural phenomena the danger is constantly present of laying greater stress on specific phases of a culture than the world of reality in its vast complexity and diversity of interrelations may warrant. I do not pretend to have avoided this mistake in all cases. I am certain, however, that this shortcoming is but of relative importance and can be readjusted more or less accurately by future investigations.

In spite of the incompleteness of the paper, I believe that the essential point appears with absolute clearness,—namely that the cultural setting of the Pueblo is not equal to the sum of imaginary "Kulturschichten," but involves real and objective psychological problems. As soon as these problems are apprehended, our vision can no longer be obscured by Graebner's pseudo-historical method of statistical inventory and alleged reconstruction.

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